MANUFACTURER DOCUMENT PACKAGE

Manufacturer's Manual

Reference package for procurement and maintenance review

HONEYWELL

8C-PDIPA1 51454471-375

DIGITAL PULSE INPUT MODULE

Used with the applicable Experion LX Series 8 configuration.

REFERENCE PACKAGE

OFFICIAL DOCUMENT

Selected official manufacturer pages follow this cover.

Source: Honeywell Series 8 Controller and I/O Specification S803-150-530, May 2024; pages 17 and 33.

4.3.2. I/O Module Sizes

IOTA Sizing is nominal (6in = 152mm, 9in =228mm, 12in =304mm). I/O modules are associated with their respective IOTAs in the table below. The I/O Module is supported by one or more IOTAs. Below section also provides an overview of various available IO modules, IOTA, IOTA size and redundancy features.

I/O Module (Coated)	IOTA (Coated)	Description	Circuits	Size (in “)	Red.
8C-PAIH54		High-level AI HART, Differential	16		√
	8C-TAIDA1	AI IOTA		9	
	8C-TAIDB1	AI IOTA Redundant		12	√
8C-PAIHA1		High-level AI HART, Single-ended	16		√
8C-PAINA1		High-level AI w/o HART, Single-ended	16		√
	8C-TAIXA1	AI IOTA		6	
	8C-TAIXB1	AI IOTA Redundant		12	√
8C-PAIMA1		Low-level AI – RTD & TC	16		
	8C-TAIMA1	Low-level AI IOTA		9	
8C-PAOHA1		Analog Output HART	16		√
8C-PAONA1		Analog Output w/o HART	16		√
	8C-TAOXA1	AO IOTA		6	
	8C-TAOXB1	AO IOTA Redundant		12	√
8C-PDILA1		Digital Input 24V	32		√
8C-PDISA1		Digital Input Sequence of Events	32		√
8C-PDIPA1		Digital Input 24V Pulse Accumulation	32		√
	8C-TDILA1	DI 24V IOTA		9	
	8C-TDILB1	DI 24V IOTA Redundant		12	√
8C-PDODA1		DO 24V Bussed Out	32		√
	8C-TDODA1	DO 24V Bussed IOTA		9	
	8C-TDODB1	DO 24V Bussed IOTA Redundant		12	√
	8C-SDOX01	DO Relay Extension [1]		15	√

Note 1- DO Relay Extension board is used along with DO IO module with IOTA (Redundant or non-redundant). Refer Section 4.4.11 for more details.

4.4.9. Digital Input Pulse Accumulation

Function

The Digital Input Pulse Accumulation accepts 24VDC signals as discrete inputs. The first 16 channels can be configured either as Digital Input or Pulse accumulation to support Pulse Accumulation and frequency measurement on per channel basis.

Notable Features

- Extensive internal diagnostics for data integrity
- Optional redundancy
- Internal / External field power selection
- Galvanic isolation
- Support Pulse Accumulation & frequency measurement
- Support mix of per channel Pulse accumulation and DI

Detailed Specification – Digital Input Pulse Accumulation (8C-PDIPA1)

Parameter	Specification		
Input / Output Module	8C-PDIPA1 - 24VDC Digital Input Pulse Accumulation, Coated		
IOTA Modules	8C-TDILA1	Non Redundant, Coated	9”
	8C-TDILB1	Redundant, Coated	12”
Input Channels [1]	32		
Galvanic Isolation (any input terminal voltage referenced to common) [2]	1000 VAC RMS		
Isolation Technique	Optical (In IOM)		
Voltage Rating	24 VDC		
DI Power Voltage Range	18 to 30 VDC (For user supplied field power)		
Module current rating	105 mA		
Signal Type (Pulse Accumulation)	Accumulation Type (0-1KHz, for minimum 30% DUTY CYCLE devices)		
Minimum Pulse Width	300 uSec		
Individual Channel SCAN Time	300 uSec		
ON Sense Voltage/Current	13 VDC (min) or 3 mA (min)		
OFF Sense Voltage/Current	5 VDC (max) or 1.2 mA (max)		
Input Impedance	4.2 KΩ		
Absolute Delay Across Input Filter and Isolation	5 ms ± 20%		
Module Removal and Insertion Under Power	Supported		
Note 1 – Channels 1-16 can support Pulse accumulation on per channel basis and Channels 17-32 can be configured as DI Note 2 – System to Field type isolation, option available only with external user supplied power			